

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
20 January 2005 (20.01.2005)

PCT

(10) International Publication Number  
**WO 2005/005356 A2**

(51) International Patent Classification<sup>7</sup>: **C07C 37/00**

(21) International Application Number:  
PCT/EP2004/007193

(22) International Filing Date: 1 July 2004 (01.07.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
MI 2003 A 001354 2 July 2003 (02.07.2003) IT

(71) Applicant (for all designated States except US): **CONSIGLIO NAZIONALE DELLE RICERCHE** [IT/IT];  
Piazzale Aldo Moro, 7, I-00185 Roma (IT).

(71) Applicant and

(72) Inventor: **PICCOLO, Oreste** [IT/IT]; Via Bornò, 5,  
I-23896 Sirtori (IT).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **ULGHERI, Fausta** [IT/IT]; S.V. La Maccia di la Saba, 26, I-07040 Li Punti (IT). **MARCHETTI, Mauro** [IT/IT]; Via Monte Arana, 8, I-07043 Bonnanaro (IT).

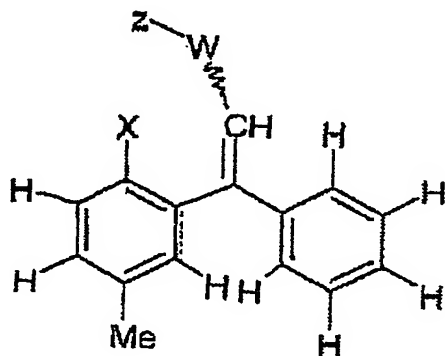
(74) Agents: **MARCHI, Massimo** et al.; Marchi & Partners S.R.L., Via Pirelli, 19, I-20124 Milano (IT).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

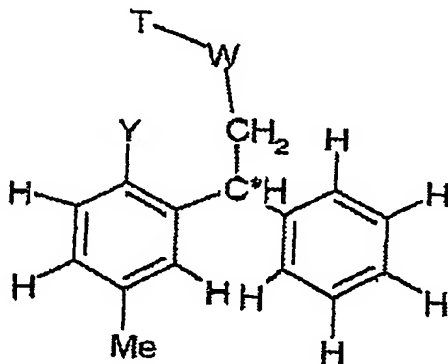
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,

[Continued on next page]

(54) Title: ENANTIOSELECTIVE SYNTHESIS OF ENANTIOMERICALLY ENRICHED COMPOUNDS



(I)



(II)

(57) Abstract: Method of preparing an enantiomerically enriched compound of formula (II) comprising enantioselective hydrogenation of a compound of general formula (I): where W, X and Z have the meanings indicated in the description, to give a compound of general formula (II): where W, Y, T and C\* have the meanings indicated in the description, in the presence of a catalyst or its suitable precursor based on Rh, Ru or Ir, having an oxidation state of 0, +1 or +2, and containing at least one enantiomerically enriched chiral ligand.

WO 2005/005356 A2



ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,  
SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,  
GW, ML, MR, NE, SN, TD, TG).

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

**Published:**

- *without international search report and to be republished upon receipt of that report*